

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. 187TVP01

Application No. 187

Administrative Revision: September 25, 2002

Issue Date: October 23, 2001

Expiration Date: October 22, 2006

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **North Slope Borough**, for the operation of the **North Slope Borough Service Area Ten Incinerator Plant**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

As set out in 18 AAC 50.340(i), after the issue date of this permit, the Permittee is no longer required to comply with the terms and conditions of Air Quality Control Permit to Operate No. 9473-AA003.

John F. Kuterbach, Manager

Air Permits Program

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List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS.....	Alaska Statutes
ASTM.....	American Society for Testing and Materials
CEMS.....	Continuous Emission Monitoring System
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COMS	Continuous Opacity Monitoring System
dscf.....	Dry standard cubic feet
EPA	US Environmental Protection Agency
ESP.....	Electro Static Precipitator
gr./dscf.....	grain per dry standard cubic feet (1 pound = 7000 grains)
GPH.....	gallons per hour
H ₂ S	Hydrogen Sulfide
HAPs	Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID.....	Source Identification Number
kPa.....	kiloPascals
MACT	Maximum Achievable Control Technology
NESHAPs.....	Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 C.F.R. 61]
NO _x	Oxides of Nitrogen
NSPS.....	Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
PM ₁₀	Particulate Matter over 10 Microns in Size
PM.....	Particulate Matter
ppm.....	Parts per million
PS	Performance specification
PSD	Prevention of Significant Deterioration
QA.....	Quality Assurance
RM.....	Reference Method
SIC.	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH.....	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [as defined in 18 AAC 50.990(103)]
wt%.....	weight percent

Section 1. Identification

Names and Addresses

Permittee: **North Slope Borough**
Pouch 340044
Prudhoe Bay, Alaska 99737-0044

Facility: **North Slope Borough Service Area Ten Incinerator Plant**

Location: 70° 12' 45" North; 148° 24' 06" West

Physical Address: SA-10 Camp
Prudhoe Bay, Alaska 99737

Owner: North Slope Borough
Pouch 340044
Prudhoe Bay, Alaska 99737-0044

Operator: North Slope Borough
Pouch 340044
Prudhoe Bay, Alaska 99737-0044

Permittee's Responsible Official Joe Singleton and Jack Azizeh

Designated Agent: Joe Singleton and Jack Azizeh
North Slope Borough
(907) 659-0124

Facility and Building Contact: Joe Singleton and Jack Azizeh
North Slope Borough
phone: (907) 659-0102; fax: (907) 659-2454
jsingleton@co.north-slope.ak.us; jazizeh@co.north-slope.ak.us

Fee Contact: Joe Singleton and Jack Azizeh
North Slope Borough
(907) 659-0124

SIC Code of the Facility: 4953 - Refuse Systems

[18 AAC 50.350(b), 1/18/97]

Section 2. General Emission Information

Emissions of Regulated Air Contaminants, as provided in the Permittee's application:

Nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), Particulate Matter - 10 (PM₁₀), volatile organic compounds (VOC), and hydrogen sulfide (H₂S)

Operating Permit Classifications:

1. 18 AAC 50.325(b)(2) due to hydrogen chloride (HCl)
2. 18 AAC 50.325(c) due to 18 AAC 50.300(b)(3)

Facility Classifications as described under 18 AAC 50.300(b)-(f):

1. Ambient Air Quality Facility under 18 AAC 50.300(b)(3)
2. Hazardous Air Contaminant Major Facility under 18 AAC 50.300(f) due to hydrogen chloride (HCl)

[18 AAC 50.350(b), 1/18/97]

Section 3. Fee Requirements

- 1. Assessable Emissions.** The Permittee shall pay to the department annual emission fees based on the facility's assessable emissions as determined by the department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The department will assess fees per ton of each air contaminant that the facility emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

- 1.1 the facility's assessable potential to emit of 144.8 tpy (36.4 tons of NO_x, 38.5 tons of SO₂, 22.5 tons of PM-10, 33.4 tons of CO and 14 tons of VOC); or
- 1.2 the facility's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the department, when demonstrated by
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the department.

[18AAC50.400 - 420 & 18 AAC 50.350(c), 1/18/97]

- 2. Assessable Emissions Estimates.** Emission fees will be assessed as follows:

- 2.1 no later than March 31 of each year, the Permittee may submit an estimate of the facility's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the department can verify the estimates; or
- 2.2 if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in condition 1.1.

[18AAC50.410 & 18 AAC 50.350(c), 1/18/97]

Section 4. Source Inventory and Description

Sources listed below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only.

TABLE 1 Source Inventory

ID	Source Name	Source Description	Rating/size	Install Date
1	Incinerator	Basic Pulse Hearth Boiler, Model 5000 using natural gas for the supplemental fuel, with an electrostatic precipitator (ESP) for a control device	5000 lb/hr @ 8,000 Btu/lb derated to 2500 lb/hr ¹	1981
2	Boiler #1	Diesel/Natural-Gas Fired Boiler	122 boiler hp	1981 – 1982
3	Boiler #2	Diesel/Natural-Gas Fired Boiler	122 boiler hp	1981 – 1982
4	Generator #1	Backup Diesel Generator	840 hp / 600 kW	1981 – 1982
5	Generator #2	Backup Diesel Generator	348 hp / 250 kW	1981 – 1982
6	Miscellaneous	Fugitive Emissions	N/A	N/A

Note 1: In February 1996, Basic Envirotech Inc. (i.e. the incinerator manufacturer) performed a number of physical changes to the Model 5000 to reduce the capacity of the unit by one half. This derating is documented in a March 10, 1999 letter from Basic Envirotech, Inc. to the Permittee.

Section 5. Source-Specific Requirements

Incinerator, i.e. Source ID 1

Visible Emissions

3. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID 1 to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one hour.

[18 AAC 50.050(a)(2), 1/18/97]

- 3.1 Monitor and record the opacity of the exhaust effluent using a continuous opacity monitoring system (COMS) as follows:
- a. The COMS must meet the performance specifications (PS) set forth in 40 CFR 60, Appendix B, PS-1, Sections 1 – 6, including siting the COMS in the exhaust stack at a location where representative measurements of visible emissions can be obtained.
 - b. At least every two years from the date of the last PS test, conduct a performance specification verification test of the COMS and report the results in accordance with 40 CFR 60, Appendix B, PS-1, Sections 7 – 10.
 - c. Operate and maintain the COMS in accordance with the manufacturer's written requirements and recommendations, and in accordance with the quality assurance (QA) plan for the COMS that incorporates the requirements of 40 CFR 60 (7/1/99 edition), Appendix B, PS-1. Record activities taken according to this paragraph in a maintenance log or forms contained in the QA plan.
 - d. Except during COMS breakdowns, repairs, calibration checks, and zero and span adjustments, complete at least one cycle of sampling and analyzing for each successive 10-second period of source operation. Calculate and record the average opacity for successive one-minute periods from these data.
 - e. At least once daily, conduct a zero and span check in accordance with 40 CFR 60.13(d) and the QA plan. Adjust zero and span whenever the zero or span drift exceeds 4% opacity in a 24-hour period. If the COMS has auto calibration and zero features, then monitor the results of the auto calibrations and record instances when the zero or span drift exceeds 4% in a 24-hour period.
 - f. At least once each operating hour, review the opacity strip chart recorders for potential exceedances of the 20% opacity limit. If opacity exceeds 20%, then promptly initiate corrective actions. Corrective actions include but are not limited to:

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- (i) adjustment of incinerator and electrostatic precipitator (ESP) operating parameters;
 - (ii) adjustment of the loading rate and/or the composition of the waste stream charged into the incinerator; and
 - (iii) adjustment of the airflow rate into the incinerator.

[18 AAC 50.040(a)(4), 7/2/00; 18 AAC 50.350(d)(1)(C), 6/21/98; & 18 AAC 50.350(g) – (h), 1/18/97]

3.2 Each operating day, monitor and record:

- a. the time periods when the opacity exceeds 20%; and
- b. the time periods when the COMS is offline during incinerator operation and the reason that the COMS is offline.

[18 AAC 50.350(g) – (h), 1/18/97]

3.3 Report under condition 45 if:

- a. four or more one-minute block average opacities in any one-hour period measured by the COMS are greater than 20%; or
- b. the COMS is offline for more than 72 hours. In the report, provide
 - (i) the anticipated time to repair or replace the COMS,
 - (ii) the cause of the malfunction, and
 - (iii) time periods the incinerator operated while the COMS was offline.

[18 AAC 50.350(i), 1/18/97]

3.4 Submit a summary of COMS outages with the report required by condition 47.

[18 AAC 50.350(i), 1/18/97]

4. The Permittee shall not allow the relief damper (also called “Cupola Cap” or “Auxiliary Vent”) on Source ID 1 to open, except as provided in 18 AAC 50.240(d) – (g).

[18 AAC 50.050(a)(2) & 18 AAC 50.240(d) – (g), 1/18/97]

4.1 Monitor and record the dates and times of the day when the relief damper is open and the total amount of time per month, in minutes, that the relief damper is open.

[18 AAC 50.350(g) – (h), 1/18/97]

4.2 Report under condition 45 whenever the relief damper opens.

[18 AAC 50.350(i), 1/18/97]

4.3 Report a summary of the records required by condition 4.2 with the report required by condition 47.

[18 AAC 50.350(i), 1/18/97]

Particulate Matter

5. The Permittee shall not cause or allow particulate matter (PM) emitted from Source ID 1 to exceed 0.08 grains per cubic foot of exhaust gas corrected to 12 percent CO₂ and standard conditions, averaged over three hours.

[18 AAC 50.050(b), 1/18/97]

- 5.1 At least once every 24 calendar months after the most recent PM source test, conduct a source test on the exhaust stack of Source ID 1 in accordance with Section 9 with Source ID 1 charging oily waste at a charging rate at least equal to the maximum oily waste charging rate during the life of the permit prior to this source test.

[18 AAC 50.350(g), 1/18/97]

- 5.2 During this and all other PM source tests:

- a. monitor and record in accordance with conditions 3.1, 3.2, 4.1, 6.2, 8.1, 9.1, 14.1, and 15.1 of this permit; and
- b. monitor and record the CO₂ concentration of the exhaust gas of Source ID 1 and convert this concentration to percent CO₂.

[18 AAC 50.350(g) – (h), 1/18/97]

- 5.3 Compute and record the PM concentration corrected to 12% CO₂ for each source test run using the following equation:

$$c_{12} = c_s \times (12 \div \%CO_2)$$

Where:

c_{12} is the PM concentration, corrected to 12 percent CO₂, in units of gr./dscf.

c_s is the PM concentration measured during the source test run in units of gr./dscf.

$\%CO_2$ is the percent CO₂ concentration on a dry basis measured during the source test run.

[18 AAC 50.350(g) – (h), 1/18/97]

- 5.4 Submit the source test plan, notification, and results in accordance with conditions 37, 38, and 39.

[18 AAC 50.350(i), 1/18/97]

- a. Report the planned oily-waste charging rate that this source test will be conducted at as part of the source test plan.
- b. Report the information recorded under conditions 5.2 and 5.3 taken during the source test, with the source test report.

[18 AAC 50.350(i), 1/18/97]

[18 AAC 50.350(i), 1/18/97]

5.5 Report under condition 45 if:

- a. condition 3.3, 4.2, 6.3, 7.2, 8.2, 9.2, 14.2, or 15.2 require an excess emission or permit deviation report to be sent to the department; or
- b. the PM concentration from this source test for Source ID 1 results in a violation of the emission limit in condition 5.

[18 AAC 50.350(i), 1/18/97]

6. The Permittee shall operate the electrostatic precipitator (ESP) within the manufacturer's recommended operating parameter ranges, except during startup, shutdown, and as provided in 18 AAC 50.240(e) – (g).

[18 AAC 50.050(b), 1/18/97]

6.1 Submit the ESP manufacturer's recommended operating parameters—including the ESP temperature, voltage, and current ranges—to the department within 6 months after the issue date of this permit.

[18 AAC 50.350(i), 1/18/97]

6.2 Monitor and record the following information each day that the incinerator operates:

- a. any periods when the ESP operates outside of the manufacturer's recommended operating parameters and whether the opacity standard was exceeded during this period;
- b. any periods when the ESP is bypassed or not operated; and
- c. a description of corrective actions taken to bring the operating parameters within range and the effectiveness of the corrective action.

[18 AAC 50.350(g) – (h), 1/18/97]

6.3 Report under condition 45 whenever the ESP is not operated in accordance with condition 6.1.

[18 AAC 50.350(i), 1/18/97]

6.4 Report a summary of the records required by condition 6.2 with the report required by condition 47.

[18 AAC 50.350(i), 1/18/97]

7. The Permittee shall develop a standard operating procedures manual for the incinerator operators.

[18 AAC 50.050(b) & 18 AAC 50.350(g) – (h), 1/18/97]

7.1 Submit the manual to the department within 6 months after the issue date of this permit.

[18 AAC 50.350(i), 1/18/97]

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- 7.2 Report under condition 45 whenever the incinerator is not operated in accordance with this manual, after submittal to the department.

[18 AAC 50.350(i), 1/18/97]

Dioxins and Furans

8. The Permittee shall not cause or allow the hourly average of CO concentration emitted from Source ID 1 to exceed 100 ppm by volume.

[18 AAC 50.110, 5/26/72; 18 AAC 50.350(d)(1)(D), 6/21/98]

[Permit No. 9473-AA003, condition 6 and Exhibits B & C, 2/7/94]

- 8.1 Monitor and record the CO concentration emitted from Source ID 1.

- a. Use an instrument with a maximum full-scale range of no more than 500 ppm CO and with a specified accuracy within ± 25 ppm.
- b. Calibrate the instrument according to the specifications of the manufacturer.
- c. The CO continuous emission monitoring system (CEMS) must meet the performance specifications (PS) set forth in 40 CFR 60, Appendix B, PS-4, Sections 1 – 3, including siting the CEM in the exhaust stack at a location where representative measurements of CO emissions can be obtained.
- d. The CO continuous emission monitoring system (CEMS) must follow the quality assurance procedures of 40 CFR 60, Appendix F.

[18 AAC 50.040(a)(4), 7/2/00; and 18 AAC 50.350(g) – (h), 1/18/97]

- 8.2 Report under condition 45 whenever the hourly average of CO concentration emitted from Source ID 1 exceeds 100 ppm by volume.

[18 AAC 50.350(i), 1/18/97]

- 8.3 Report under the facility operating report required under condition 47 the monthly averages and the highest monthly one-hour average CO concentration emitted from Source ID 1 during the reporting period.

[18 AAC 50.350(i), 1/18/97]

9. The Permittee shall not cause or allow the five-minute average combustion zone temperature of Source ID 1 not to exceed 1500 °F, i.e. 1500 °F is the minimum allowed, except during startup and shutdown.

[18 AAC 50.110, 5/26/72; 18 AAC 50.350(d)(1)(D), 6/21/98]

[Permit No. 9473-AA003, Exhibits B & C, 2/7/94]

- 9.1 Monitor and record the five-minute average combustion zone temperature of Source ID 1.

- a. Use a thermocouple operated in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs, unless otherwise specified in writing by the department; and

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- b. Follow the thermocouple manufacturer's calibration recommendations.

[18 AAC 50.350(g) – (h), 1/18/97]

- 9.2 Report under condition 45 whenever the five-minute average combustion zone temperature of Source ID 1 does not exceed 1500 °F.

[18 AAC 50.350(i), 1/18/97]

- 9.3 Report under the facility operating report required under condition 47 the monthly averages and the lowest monthly five-minute average combustion zone temperature of Source ID 1 during the reporting period.

[18 AAC 50.350(i), 1/18/97]

Incinerator Residue (Ash)

10. The Permittee shall dispose of residue (ash) from Source ID 1 only at a solid waste facility approved by the department.

[18 AAC 50.350(d)(1)(D), 6/21/98]

[18 AAC 60.005(a), 7/11/99]

[Permit No. 9473-AA003, condition 5, 2/7/94]

Fuel-Burning Equipment, Source IDs 2 – 5

Visible Emissions

11. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from Source ID 2 – 5, to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one hour.

Monitor, record and report according to Section 13.

[18 AAC 50.055(a)(1), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98; & 18 AAC 50.350(g) – (i), 1/18/97]

Particulate Matter

12. The Permittee shall not cause or allow PM emitted from Source ID 2 – 5 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

Monitor, record and report according to Section 13.

[18 AAC 50.055(b)(1), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98; & 18 AAC 50.350(g) – (i), 1/18/97]

Sulfur Compound Emissions

13. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from Source ID 2 – 5 to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97; 18 AAC 50.350(d)(1)(C), 6/21/98]

13.1 Diesel Fuel:

- a. Obtain a statement or receipt from the fuel supplier for each fuel shipment received that certifies either the fuel sulfur content or that the fuel grade is DF-1 or DF-2. If a certificate is not available from the supplier, then analyze a representative sample of the fuel to determine the sulfur content using ASTM method D129-00, D1266-98, D1552-95, D2622-98, D4294-98, D4045-99. Report under condition 45 whenever fuel combusted does not meet the 0.5% requirements of condition 13.1a; this fuel sulfur content is the basis of the SO₂ potential to emit in condition 1.1. When reporting under this condition, include a material balance calculation of the sulfur compound emissions, in ppm of SO₂, expected from this fuel, made using the equations in Section 15.
- b. Report under condition 45 whenever fuel combusted causes sulfur compound emissions to exceed the standard of condition 13; this fuel sulfur content is the basis of the SO₂ potential to emit in condition 1.1. When reporting under this condition, include a material balance calculation of the sulfur compound emissions, in ppm of SO₂, expected from this fuel, made using the equations in Section 15.
- c. Record the fuel sulfur content or the fuel grade of each shipment required under condition 13.1a and record all material balance calculations required under condition 13.1b.
- d. Attach copies of the records required by condition 13.1c with the facility operating reports required by condition 47.

[18 AAC 50.350(g) - (i), 1/18/97]

13.2 Fuel Gas:

- a. Obtain a semiannual statement or receipt from the fuel supplier certifying the fuel gas H₂S concentration in ppm. If a certificate is not available from the supplier, then analyze a representative sample of the fuel semiannually to determine the sulfur content using 40 CFR 60, Appendix A, Method 11.
- b. Report under condition 45 whenever the H₂S concentration of the fuel gas obtained or analyzed exceeds 60 ppm. This H₂S concentration is the basis for the SO₂ potential to emit in condition 1.1.
- c. Record the H₂S concentration of the fuel gas required under condition 13.2a.
- d. Attach copies of the records required by condition 13.2c with the facility operating reports required by condition 47.

[18 AAC 50.350(g) - (i), 1/18/97]

[18 AAC 50.410(c), 1/18/97]

Section 6. Facility-Wide Requirements

Owner Requested Operating-Hour Limits

- 14.** The Permittee shall not operate Source IDs 1, 4, and 5 for more than 7000, 1000, and 500 hours per consecutive twelve months, respectively, including startup and shutdown.

[18 AAC 50.210(a)(3)(B), 1/18/97; 18 AAC 50.335(g)(1) & 18 AAC 50.350(f)(4), 6/21/98]

- 14.1 Monitor and record the total number of hours that Source IDs 1, 4, and 5 operate during each month. Once per month, the Permittee shall calculate and record the rolling, twelve-month total number of hours that Source IDs 1, 4, and 5 operated for the previous twelve consecutive months.
- 14.2 Report under condition 45 whenever the total number of hours that Source IDs 1, 4, or 5 operate in any consecutive twelve months exceeds 7000, 1000, or 500 hours, respectively.
- 14.3 Report under the facility operating report required under condition 47 the total number of hours that Source ID 1 operates during each month and the rolling, twelve-month total number of hours for each month.

[18 AAC 50.350(g) – (i), 1/18/97]

Owner Requested Charging Rate Limit

- 15.** The Permittee shall not charge more than 30 tons of waste per day in Source ID 1.

[18 AAC 50.210(a)(3)(B), 1/18/97; 18 AAC 50.335(g)(1) and 18 AAC 50.350(f)(4), 6/21/98]

- 15.1 Monitor and record the total tons of waste that Source ID 1 charges (i.e. feeds into the incinerator) each day, with an accuracy of ± 5 percent.
- 15.2 Report under condition 45 whenever the total number of tons that Source ID 1 incinerates in any day exceeds 30 tons.
- 15.3 Report under the facility operating report required under condition 47 the maximum daily total tons of waste that Source ID 1 charged each month during the reporting period and the total tons of waste that Source ID 1 charged each month.

[18 AAC 50.350(g) – (i), 1/18/97]

Owner Requested Incineration Prohibitions

- 16.** The Permittee shall not incinerate medical, hospital, or infectious waste or sewage sludge in Source ID 1.

[18 AAC 50.210(a)(3)(B), 1/18/97; 18 AAC 50.335(g)(1) and 18 AAC 50.350(f)(4), 6/21/98]

Section 7. Insignificant Sources

This section contains the requirements that the Permittee identified under 18 AAC 50.335(q)(2) as applicable to insignificant sources at the facility. This section also specifies the testing, monitoring, reporting, and recordkeeping for insignificant sources that the department finds necessary to ensure compliance with the applicable requirements. Insignificant sources are not exempted from any air quality control requirement or federally enforceable requirement.

As set out in 18 AAC 50.350(m), the shield of AS 46.14.290 does not apply to insignificant sources.

- 17.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one hour.

[18 AAC 50.050(a)(2) & 18 AAC 50.055(a)(1), 1/18/97]

- 18.** The Permittee shall not cause or allow PM emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1), 1/18/97]

- 19.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c), 1/18/97]

- 20.** Based on reasonable inquiry, the Permittee shall certify compliance with the requirements specified in conditions 17, 18, and 19 as set out in condition 48.

[18 AAC 50.350(m)(3), 6/21/98]

Section 8. Generally Applicable Requirements

- 21. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

- 22. Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

- 23. Facilities Containing NSPS and NESHAPS Sources.** The Permittee shall comply with the requirements of 40 C.F.R. 60 New Source Performance Standards (NSPS), 40 C.F.R. 61 National Emission Standards for Hazardous Air Pollutants (NESHAPS) and 40 C.F.R. 63 National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories as they apply to the facility.

[18 AAC 50.040(a) & (c), 7/2/00; 18 AAC 50.040(b), 1/18/97; 18 AAC 50.350(d)(1), 1/18/97]

- 24. Good Air Pollution Control Practice.**

24.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate Source IDs 1 - 5, including affected air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the department which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

24.2 The Permittee shall maintain and operate air pollution control equipment according to the manufacturer's recommendations. If the manufacturer's recommendations are not available the Permittee shall operate the equipment according to an operation and maintenance plan. The Permittee shall revise the plan if requested by the department.

24.3 The Permittee shall keep records of maintenance performed and a copy of any manufacturer's procedures and operation and maintenance plans for the sources listed in condition 24.1.

[18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

- 25. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

26. Bulk Materials Handling, Construction and Industrial Activities. The Permittee shall take reasonable precautions to prevent PM from being emitted into the ambient air as a result of industrial activities, construction projects, or the handling, transportation, and storage of bulk materials.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.045(d) & 18 AAC 50.350(d)(1), 1/18/97]

26.1 Keep records describing all precautions taken to prevent PM from becoming airborne due to any of the activities described in this condition. If the precautions taken by the Permittee are not listed in the State Air Quality Control Plan, also record a statement describing why the Permittee finds the precaution reasonable. Reasonable precautions, as listed in the State Air Quality Control Plan, include:

- a. installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials;
- b. use of water or chemicals for dust control in the demolition of existing structures, construction operations, road grading, or land clearing; and
- c. application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles and other surfaces which can create airborne dusts.

[18 AAC 50.040(e), 7/2/00 & 18 AAC 50.350(g) – (h), 1/18/97]

26.2 At least once each month, perform visual surveys of fugitive PM sources by:

- a. conducting a survey of all bulk materials handling, construction and industrial activities at the facility for the potential of airborne PM in accordance with the procedures listed in 40 C.F.R. 60, Appendix A, RM 22; and
- b. within 2 days of discovering that PM emissions are leaving the property at a level which potentially could unreasonably interfere with the enjoyment of life or property, be injurious to human health or welfare, animal or plant life, or property, or cause an exceedance of a PM-10 ambient air quality standard or increment contained in 18 AAC 50.010(1) or 18 AAC 50.020(b)(2), initiate corrective actions to prevent emissions from leaving the property; and
- c. keep contemporaneous records of all visual surveys performed and corrective actions taken to prevent PM emissions from leaving the property; submitting summaries of the records with the facility operating report required by condition 47; and
- d. report under condition 45 whenever a visual survey reveals that PM emissions at levels specified in condition 26.2b are leaving the property.

[18 AAC 50.350(g) – (i), 1/18/97]

27. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the department.

[18 AAC 50.055(g), 1/18/97]

28. Open Burning. The Permittee shall comply with the following requirements when conducting open burning at the facility:

28.1 Open burning of asphalt, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(b) & 18 AAC 50.350(d)(1), 1/18/97]

28.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off toxic or acidic gases or PM is prohibited.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(c) & 18 AAC 50.350(d)(1), 1/18/97]

28.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(d) & 18 AAC 50.350(d)(1), 1/18/97]

28.4 Open burning is prohibited in an area if the department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(e) & 18 AAC 50.350(d)(1), 1/18/97]

28.5 When conducting open burning, the Permittee shall ensure that

- a. the material is kept as dry as possible through the use of cover or dry storage;
- b. before igniting the burn, noncombustibles are separated to the greatest extent practicable;
- c. natural or artificially induced draft is present;
- d. to the greatest extent practicable, combustibles are separated from grass or peat layer;
- e. combustibles are not allowed to smolder; and
- f. sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the department, submit copies of the records.

[18 AAC 50.040(e), 7/2/00, 18 AAC 50.065(a), 18 AAC 50.350(d)(1) & 18 AAC 50.335(g) – (h), 1/18/97]

- 29. Air Pollution Prohibited.** The Permittee shall not cause any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.040(e), 7/2/00; 18 AAC 50.110, 5/26/72; & 18 AAC 50.350(d)(1), 1/18/97]

29.1 Within 24 hours of receiving a complaint that is attributable to emissions from the facility, investigate the complaint, and

29.2 Within 48 hours time initiate necessary corrective actions to alleviate or eliminate the cause of the complaint.

[18 AAC 50.240(c) & 18 AAC 50.350(g), 1/18/97]

29.3 Keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for complaints attributable to emissions from the facility. Upon request of the department, submit copies of the records.

[18 AAC 50.350(h) – (i), 1/18/97]

- 30. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard listed in condition 22, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a) & 18 AAC 50.350(f)(3), 1/18/97]

- 31. HAP Reconstruction.** Before replacing components of a major source of HAPS as that term is defined in 40 C.F.R. 63.2, or a source that would become a major source as a result of replacement, if the cost of replacement exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source, the Permittee shall obtain written approval from the department

31.1 under 40 C.F.R. 63.5(b)(3), (d), and (e), if the source is subject to an emission standard of 40 C.F.R. 63, or

31.2 in a Notice of MACT Approval under 40 C.F.R. 63.43(f) – (h), if the source is subject to 40 C.F.R. 63.43(a).

[18 AAC 50.345(b), 6/21/98; & 18 AAC 50.350(b)(3), 1/18/97]

- 32. Permit Renewal.** To renew this permit, the Permittee shall submit a complete application under 18 AAC 50.335 no sooner than **April 22, 2005** and no later than **April 22, 2006** to renew this permit.

[18 AAC 50.335(a), 1/18/97]

Section 9. General Source Testing and Monitoring Requirements

- 33. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

- 34. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:

34.1 At a point or points that characterize the actual discharge into the ambient air; and

34.2 At the maximum rated burning or operating capacity of the source or another rate determined by the department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & 18 AAC 50.350(g), 1/18/97]

- 35. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

35.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.040(a), 7/2/00, 18 AAC 50.220(c)(1)(A) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 60, 7/1/99]

35.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b), 18 AAC 50.220(c)(1)(B) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 61, 12/19/96]

35.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00; 18 AAC 50.220(c)(1)(C) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, 7/1/99]

35.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 14.

[18 AAC 50.030, 12/30/00; 18 AAC 50.220(c)(1)(D) & 18 AAC 50.350(g), 1/18/97]

35.5 Source testing for emissions of PM, sulfur compounds, nitrogen compounds, CO, lead, VOC, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified
40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(4), 7/2/00 18 AAC 50.220(c)(1)(E) & 18 AAC 50.350(g), 1/18/97]

[Federal Citation: 40 C.F.R. 60, Appendix A, 7/1/99]

35.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M.

[18 AAC 50.035, 7/2/00; 18 AAC 50.220(c)(1)(F) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 51, Appendix M, 7/1/99]

35.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the department in accordance with Method 301 in Appendix A to 40 C.F.R. 63.

[18 AAC 50.040(c), 7/2/00, 18 AAC 50.220(c)(2) & 18 AAC 50.350(g), 1/18/97]
[Federal Citation: 40 C.F.R. 63, Appendix A, Method 301, 7/1/99]

36. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 70° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3), 18 AAC 50.350(g) & 18 AAC 50.990(88), 1/18/97]

37. Test Plans. Before conducting any source tests, the Permittee shall submit a plan to the department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under condition 33 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(a)(10), 18 AAC 50.350(b)(3) & 18 AAC 50.350(g), 1/18/97]

38. Test Notification. At least 10 days before conducting a source test, the Permittee shall give the department written notice of the date and time the source test will begin.

[18 AAC 50.345(a)(10)(C) & 18 AAC 50.350(b)(3), 1/18/97]

39. Test Reports. Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in condition 41.

[18 AAC 50.345(a)(10)(D), 18 AAC 50.350(b)(3) & 18 AAC 50.350(h) – (i), 1/18/97]

40. Particulate Matter Calculations. In source testing for compliance with the PM standards in conditions 5, 12, and 18, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities by ensuring that at least one test run includes the emissions caused by the routine maintenance activity and is conducted under conditions that lead to representative emissions from that activity. The emissions must be quantified using the following equation:

$$E = E_M \left[(A + B) \times \frac{S}{R \times A} \right] + E_{NM} \left[\frac{(R - S)}{R} - \frac{B \times S}{R \times A} \right]$$

Where:

- E= the total particulate matter emissions of the source in grains per dry standard cubic foot (gr./dscf)
- E_M= the particulate matter emissions in gr./dscf measured during the test that included the routine maintenance activity.
- E_{NM}= the arithmetic average of particulate emissions in gr./dscf measured during by the test runs that did not include the maintenance activity.
- A= the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour.
- B= the total period of the test run, less A.
- R= the maximum period of source operation per 24 hours, expressed to the nearest hundredth of an hour.
- S= the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour.

[18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Section 10. General Recordkeeping, Reporting, and Compliance Certification Requirements

- 41. Certification.** The Permittee shall certify all reports, compliance certifications, or other documents submitted to the department under this permit by including the signature of a responsible official for the permitted facility following the statement: “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.” For the same six-month reporting period, the excess emission and permit deviation reports submitted under condition 45 may be certified with the facility operating report required by condition 47. All other reports must be certified upon submittal.

[18 AAC 50.205, 18 AAC 50.345(a)(9), 18 AAC 50.350(b)(3) & 18 AAC 50.350(i) 1/18/97]

- 42. Submittals.** Unless otherwise directed by the department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.350(i), 1/18/97]

- 43. Information Requests.** The Permittee shall furnish to the department, within a reasonable time, any information the department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the department copies of records required to be kept by this permit. The department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 18 AAC 50.345(a)(8), 18 AAC 50.350(b)(3) & 18 AAC 50.350(g) – (i), 1/18/97]

- 44. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

44.1 Copies of all reports and certifications submitted pursuant to this section of the permit.

44.2 Records of all monitoring required by this permit, and information about the monitoring including:

- a. calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
- b. sampling dates and times of sampling or measurements;
- c. the operating conditions that existed at the time of sampling or measurement;
- d. the date analyses were performed;
- e. the location where samples were taken;

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- f. the company or entity that performed the sampling and analyses;
 - g. the analytical techniques or methods used in the analyses; and
 - h. the results of the analyses.

[18 AAC 50.350(h), 1/18/97]

- 45. Excess Emission and Permit Deviation Reports.** The Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit or that present a potential threat to human health or safety as soon as possible, but no later than 48 hours, after discovery of the event. The report must include the information listed on the form contained in Section 16. The Permittee may use this form to report emissions under this condition.

[18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97]

- 46. NSPS and NESHAP Reports.** The Permittee shall submit to the department copies of reports required by condition 21, as it applies to the facility as follows:

- 46.1 Copies of any New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 shall be attached to the facility operating report required by condition 47.
- 46.2 The Permittee shall notify the department and shall provide a written copy of any EPA granted waiver of the federal-emission standards, record keeping, monitoring, performance testing, or reporting requirements, or approved custom monitoring schedules within 30 days after receipt of a waiver or schedule. Keep a copy of each EPA issued monitoring waiver or custom monitoring schedule with the permit at the facility.

[18 AAC 50.040, 7/2/00 & 18 AAC 350(i)(2), 1/18/97]
[Federal Citation 40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]

- 47. Facility Operating Reports.** During the life of this permit, the Permittee shall submit an original and two copies of an operating report by August 1 for the period January 1 to June 30 and by February 1 for the period July 1 to December 31. Facility operating reports must include copies of the records required to be reported by the conditions of this permit. In addition, facility operating reports must include a listing of all excess emissions and permit deviations that occurred during the reporting period and must identify

- 47.1 the date of the deviation;
- 47.2 the equipment involved;
- 47.3 the permit condition;
- 47.4 a description of the deviation; and
- 47.5 any corrective action or preventive measures taken and the date of such actions.

[18 AAC 50.350(d)(4), 18 AAC 50.350(f)(3) & 18 AAC 50.350(i), 1/18/97]

48. Annual Compliance Certification. Each year by February 1, the Permittee shall compile and submit to the department an original and two copies of an annual compliance certification report as follows:

48.1 For each permit term and condition set forth in Section 3 through Section 10, including terms and conditions for monitoring, reporting, and recordkeeping:

[18 AAC 50.350(d)(4), 1/18/97]

- a. certify the compliance status over the preceding calendar year consistent with the monitoring required by this permit;
- b. state whether compliance is intermittent or continuous; and
- c. briefly describe each method used to determine the compliance status.

48.2 Submit a copy of the report directly to the U.S. EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

[18 AAC 50.350(j), 1/18/97]

Section 11. Standard Conditions Not Otherwise Included in the Permit

- 49.** Consistent with Alaska law, for purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use of any credible evidence or information relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. If this condition applies to an NSPS source, then the requirements of 40 C.F.R. 60.11(g) as adopted in 18 AAC 50.040(a)(1) also apply.

[18 AAC 50.350(f)(3), 1/18/97]

- 50.** The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:

50.1 an enforcement action,

50.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280, or

50.3 denial of an operating-permit renewal application.

[18 AAC 50.345(a)(1) & 18 AAC 50.350(b)(3), 1/18/97]

- 51.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2) & 18 AAC 50.350(b)(3), 1/18/97]

- 52.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3) & 18 AAC 50.350(b)(3), 1/18/97]

- 53.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:

53.1 included and specifically identified in the permit, or

53.2 determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4) & 18 AAC 50.350(b)(3), 1/18/97]

- 54.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any operating permit condition.

[18 AAC 50.345(a)(5) & 18 AAC 50.350(b)(3), 1/18/97]

- 55.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6) & 18 AAC 50.350(b)(3), 1/18/97]

56. The Permittee shall allow an officer or employee of the department or an inspector authorized by the department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:

56.1 enter upon the premises where a source subject to the operating permit is located or where records required by the permit are kept,

56.2 have access to and copy any records required by the permit,

56.3 inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit, and

56.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7) & 18 AAC 50.350(b)(3), 1/18/97]

Section 12. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the facility application, this section of the permit contains the requirements determined by the department not to be applicable to the permitted facility.

- 57.** The table below, Table 2 Permit Shields Granted., identifies the sources that are not subject to the specified requirements at the time of permit issuance. Some of the requirements listed below may become applicable during the permit term due to an invoking event, even though the requirement is deemed inapplicable at the time of permit issuance. Such requirements shall be met on a timely basis by the Permittee by submittal of a compliance schedule in accordance with 18 AAC 50.350(k).

Table 2 Permit Shields Granted.

Source ID	Non Applicable Requirements	Reason for non-applicability
1	40 CFR 60, Subpart Cb	The maximum charging rate for this incinerator is less than 250 tons per day.
1	40 CFR 60, Subpart Ce	Condition 16 prohibits this incinerator from incinerating hospital, medical, and infectious waste.
1	40 CFR 60, Subpart E	The maximum charging rate for this incinerator is less than 50 tons per day.
1	40 CFR 60, Subpart Ea	The maximum charging rate for this incinerator is less than 250 tons per day and it was constructed before December 1989.
1	40 CFR 60, Subpart Eb	The maximum charging rate for this incinerator is less than 250 tons per day and it was constructed before September 1984.
1	40 CFR 60, Subpart Ec	Condition 16 prohibits this incinerator from incinerating hospital, medical, and infectious waste and it was constructed before June 1996.
N.A.	40 CFR 60, Subpart K	Each tank at this facility is less than 40,000 gallons.
N.A.	40 CFR 60, Subpart Ka	Each tank at this facility is less than 40,000 gallons.
N.A.	40 CFR 60, Subpart Kb	Each tank at this facility is less than 40 cubic meters (10,560 gallons) and was constructed before 1984.
1	40 CFR 60, Subpart O	Condition 16 prohibits this incinerator from incinerating sewage sludge.
1	40 CFR 61, Subpart E	Condition 16 prohibits this incinerator from incinerating sewage sludge.
1	18 AAC 50.050(a)(1)	Condition 16 prohibits this incinerator from incinerating sewage sludge.

[18 AAC 50.350(l), 1/18/97]

Section 13. Visible Emissions and Particulate Matter Monitoring Plan

Visible Emissions Observations for Liquid Fuel and Natural Gas Fired Sources

- 58.** As provided in Table 3, the Permittee shall observe the exhaust of Source IDs 2 – 5 for visible emissions using **either** the Method-9 Plan **or** the Smoke/No-Smoke Plan. The Permittee may change visible-emission plans for a source at any time. Upon permit issuance start visible emissions monitoring with the **Initial Monitoring Frequency**.

[18 AAC 50.350(g) – (i), 1/18/97]

Table 3 Visual Observation Methods

	Method-9 Plan	Smoke/No Smoke Plan
Initial Monitoring Frequency	<p>Within six months after the issue date of this permit or within seven calendar days after changing from the Smoke/No-Smoke Plan), whichever is later, and at least monthly (semiannually for pipeline quality natural gas fired sources) that a source operates thereafter, observe its exhaust for six minutes to obtain 24 individual 15-second opacity readings in accordance with Section 14.</p> <ul style="list-style-type: none"> • If two or more individual 15-second readings during the six-minute observation period are greater than 20% opacity, then continue the Method-9 observations for an additional 12 minutes for a total of 18 minutes. • If four or more individual 15-second readings during the 18-minute observation period are greater than 20% opacity, then continue the Method-9 observations for an additional 42 minutes for a total of 60 minutes. 	<p>During each calendar day (quarterly for pipeline quality natural gas fired sources) that a source operates, observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor. Record the following information in a written log for each observation and submit copies of the records upon request of the department:</p> <ul style="list-style-type: none"> • the date and time of the observation; • from Section 4 Table 1 of this permit, the ID of the source observed; • whether visible emissions are present or absent in the exhaust; • if the source starts operation on the day of the observation, the startup time of the source; and • name and title of the person making the observation.

	Method-9 Plan	Smoke/No Smoke Plan
Reduced Monitoring Frequency	If 60 minutes of observations were not necessary under the initial monitoring frequency, or the source was observed for 60 minutes and no more than eight individual 15-second readings are greater than 20% opacity during the most recent observation, then reduce the number of six-minute observations to one observation for every quarter (no reduction for pipeline quality natural gas fired sources) that a source operates.	If the source operated without visible smoke in the exhaust during the most recent month, then reduce the number of Smoke/No-Smoke observations to one observation for every month (no reduction for pipeline quality natural gas fired sources) that a source operates.
Increased Monitoring Frequency	If a source is observed for 60 minutes and more than eight, but fewer than thirteen individual 15-second readings are greater than 20% opacity during the most recent observation, then increase the observation frequency to, or maintain at monthly intervals, until the criterion for reduced monitoring frequency specified above is met.	No increased monitoring frequency. Go to condition 60 or to the initial monitoring frequency of the Method-9 Plan.

- 59.** The Permittee is not required to comply with conditions 37, 38 and 39 (Test Plans, Test Notifications and Test Reports) when the exhaust is observed for visible emissions under condition 58.

[18 AAC 50.350(g)-(i), 1/18/97]

Corrective Actions Based on Smoke/No Smoke Observations

- 60.** If under the Smoke/No Smoke Plan visible emissions are present in the exhaust during an observation performed under condition 58, then the Permittee shall:
- 60.1 Initiate actions to eliminate smoke from the source within 24 hours of the observation;
 - 60.2 Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce smoke;
 - 60.3 After completing the actions, then take smoke/no-smoke readings in accordance with condition 58 at a frequency of at least once per day for the next 30 calendar days (for both liquid and gas fired sources) that the source operates, and continue according to the optional schedule set out in condition 58; and

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- 60.4 If the actions taken under condition 60.1 do not eliminate the smoke, or if subsequent smoke is observed under the schedule set out in condition 60.3, then observe the exhaust in accordance with the Method-9 Plan until written approval has been received from the department to resume observations under the Smoke/No Smoke Plan.

[18 AAC 50.350(g)-(i), 1/18/97]

Particulate Matter Testing for Source IDs 2 – 5

- 61.** The Permittee shall conduct source tests on Source IDs 2 – 5 to determine the concentration of PM in the exhaust of a source as follows:

- 61.1 Conduct a PM source test according to the requirements set out in Section 9 no later than 90 calendar days after any time either of the following occurs (unless a follow-up Method-9 test during the 90 days shows that the following no longer occurs):

- a. A 60-minute Method-9 reading results in 13 or more 15-second readings with an opacity greater than 20%; or
- b. A 60-minute Method-9 reading results in an average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches.

- 61.2 During each PM source test, observe the exhaust for 60 minutes in accordance with Section 14 and submit a summary of these observations with the source test report.

[18 AAC 50.350(g)-(i), 1/18/97]

Reporting Requirements

- 62.** The Permittee shall, within 180 calendar days after the effective date of this permit, record and report the exhaust stack diameter of each Source IDs 2 – 5, and report this information to the department with the first or second facility operating report required by condition 47.

[18 AAC 50.350(g)-(i), 1/18/97]

- 63.** The Permittee shall notify the department in each facility operating report required by condition 47, which visible-emission plan in condition 58 was used for each source. The Permittee shall also submit with the facility operating report copies of the observation results (i.e. opacity readings) for each source that used the Method-9 Plan. The Permittee shall also indicate in the facility operating report the number of calendar days that smoke was observed for each source that used the Smoke/No-Smoke Plan.

[18 AAC 50.350(g)-(i), 1/18/97]

- 64.** Report under condition 45 if:

- 64.1 a 60-minute opacity observation results in

- a. 13 or more 15-seconds readings with an opacity greater than 20%;

-
- b. a 60-minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches; or

64.2 the results of a source test for PM exceeds the PM emission limit.

[18 AAC 50.350(g) – (i), 1/18/97]

Section 14. Visible Emission Evaluation Procedures

An observer qualified according to 40 C.F.R. 60, RM 9 shall use the following procedures to determine the reduction of visibility through the exhaust effluent.

Position. The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses).

Field Records. The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on the sheet at the time opacity readings are initiated and completed.

Observations. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals. Unless directed to do otherwise in this permit, observe emissions for 60 consecutive minutes to obtain a minimum of 240 observations.

Attached Steam Plumes. When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

Detached Steam Plume. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

Recording Observations. Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on the Visible Emissions Observation Record contained in this section. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

Data Reduction. To determine compliance with a standard set out in conditions 3, 11, and 17, count the number of observations that exceed 20 percent opacity and record this number on the sheet.

Visible Emissions Field Data Sheet

Certified Observer: _____

Company: _____

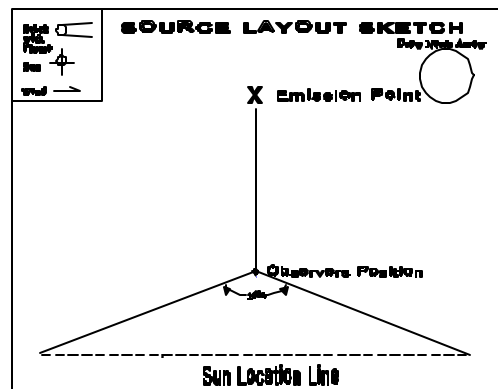
Location: _____

Test No.: _____ Date: _____

Source: _____

Production Rate, Operating Rate &
Unit Operating Hours: _____

Hrs. of observation: _____



Clock Time	Initial				Final
Observer location					
Distance to discharge					
Direction from discharge					
Height of observer point					
Background description					
Weather conditions					
Wind Direction					
Wind speed					
Ambient Temperature					
Relative humidity					
Sky conditions: (clear, overcast, % clouds, etc.)					
Plume description:					
Color					
Distance visible					
Water droplet plume? (Attached or detached?)					
Other information					

Page ____ of ____

Test Number _____ Clock time _____

[illegible]

Observer Signature _____

Duration of Observation Period (minutes) _____
 Number of Observations _____
 Number of Observations exceeding 20% _____

Set Number	Time Start—End	Opacity	
		Sum	Average

Section 15. Material Balance Calculation

If the sulfur content of any fuel combusted is greater than 0.5% by weight, calculate the three-hour exhaust concentration of SO₂ using the following equations:

$$A = 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$B = 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$C = 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$D = 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$E = B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$F = 21 - [\text{vol}\%_{\text{dry}}O_{2,\text{exhaust}}] = 21 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$G = [\text{vol}\%_{\text{dry}}O_{2,\text{exhaust}}] \div F = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$H = 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$I = E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$\text{SO}_2 \text{ concentration} = A \div I = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ PPM}$$

The **wt%*S*_{fuel}**, **wt%*C*_{fuel}**, and **wt%*H*_{fuel}** are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to condition 13.1a. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%*O*_{2,exhaust}**) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%*S*_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%*O*_{2,exhaust}** = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

Section 16. ADEC Notification Form

Fax this form to: (907) 269-7508 Telephone: (907) 269-8888

North Slope Borough
Company Name

North Slope Borough Service Area Ten Incinerator Plant
Facility Name

1. Reason for notification:

☐ **Excess Emission** ☐ **Permit Condition Deviation**

2. Event Information (Use 24-hour clock):

	START Time: (hr:min):	END Time:	Duration
Date: _____	_____:	_____:	_____:
Date: _____	_____:	_____:	_____:
		Total:	_____:

3. Cause of Event (Check all that apply):

☐ START UP ☐ UPSET CONDITION ☐ CONTROL EQUIPMENT
☐ SHUT DOWN ☐ SCHEDULED MAINTENANCE ☐ OTHER _____

Attach a detailed description of what happened, including the parameters or operating conditions exceeded.

4. Sources Involved:

Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event. Attach additional sheets as necessary.

Source ID No.	Source Name	Description	Control Device
_____	_____	_____	_____
_____	_____	_____	_____

5. Emission Limit Exceeded and/or Permit Condition Deviation:

Identify each Emission Standard and Permit Condition potentially exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Attach additional sheets as necessary.

Permit Condition	Limit	Exceedance
_____	_____	_____

6. Emission/Deviation Reduction:

Attach a description of the measures taken to minimize and/or control emissions or permit condition deviations during the event.

7. Corrective Actions:

Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Signature: _____ Date: _____

Alaska Department of Environmental Conservation

Air Permits Program

Administrative Revision: September 25, 2002

North Slope Borough

North Slope Borough Service Area Ten Incinerator Plant

LEGAL AND FACTUAL BASIS

of the terms and conditions for

Permit No. 187TVP01

Prepared by Matt Wilkinson

List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and Materials
CEMS	Continuous Emission Monitoring System
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COMS	Continuous Opacity Monitoring System
dscf	Dry standard cubic feet
EPA	US Environmental Protection Agency
ESP	Electro Static Precipitator
gr./dscf	grain per dry standard cubic feet (1 pound = 7000 grains)
GPH	gallons per hour
H ₂ S	Hydrogen Sulfide
HAPs	Hazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
ID	Source Identification Number
kPa	kiloPascals
MACT	Maximum Achievable Control Technology
NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [as defined in 40 C.F.R. 61]
NO _x	Oxides of Nitrogen
NSPS	Federal New Source Performance Standards [as defined in 40 C.F.R. 60]
PM ₁₀	Particulate Matter over 10 Microns in Size
PM	Particulate Matter
ppm	Parts per million
PS	Performance specification
PSD	Prevention of Significant Deterioration
QA	Quality Assurance
RM	Reference Method
SIC.	Standard Industrial Classification
SO ₂	Sulfur dioxide
TPH	Tons per hour
TPY	Tons per year
VOC	volatile organic compound [as defined in 18 AAC 50.990(103)]
wt%	weight percent

INTRODUCTION

This document sets forth the legal and factual basis for the terms and conditions of Operating Permit No. 187TVP01.

The **North Slope Borough Service Area Ten Incinerator Plant** is a refuse systems facility that incinerates oily wastes and municipal solid waste. The facility is owned and operated by North Slope Borough. **North Slope Borough** is the Permittee for the facility's operating permit.

PROCESS DESCRIPTION

As provided in the application, the facility contains one incinerator, two diesel/natural-gas boilers, two natural-gas boilers, and two diesel generators. In February 1996, Basic Envirotech Inc (i.e. the incinerator manufacturer) performed a number of modifications to the Model 5000 to reduce the capacity of the unit by one half. This modification is documented in a March 10, 1999 letter from Basic Envirotech, Inc. to the Permittee. The two natural-gas boilers at the facility are insignificant sources under 18 AAC 50.335(t)(5). Fuel storage tanks at this facility are too small to be subject to any state or federal regulations. The sources at the facility regulated in Operating Permit 187TVP01 are identified in TABLE 1 in Section 4 of the permit.

SOURCE INVENTORY AND DESCRIPTION

Section 4 of Operating Permit No. 187TVP01 contains TABLE 1, describing the sources regulated by the permit. The table is provided for information and identification purposes only. Specifically, the source rating/size provided in the table is not intended to create an enforceable limit.

EMISSIONS

Table A. Emissions Summary

Pollutant	NO _x	CO	PM-10	SO ₂	VOC	HCl	Pb
Potential Emissions (TPY) per AS 46.14.990(21)	36.4	33.4	22.5	38.5	14.0	28.0	0.0
Assessable Potential to Emit (TPY) under condition 1.1.	36.4	33.4	22.5	38.5	14.0	Not Appli cable	Not Appli cable
Actual Emissions from 11/1/99 to 10/31/00 (TPY) ¹	14.7	4.0	0.9	5.5 ²	3.7	7.1	0.0

Note 1: The diesel/natural-gas boilers burned only natural gas between 11/1/99 and 10/31/00.

Note 2: The actual SO₂ emissions do not consider the actual fuel sulfur quantities, i.e. actual weight percent sulfur in the diesel fuel and H₂S concentration in the natural gas. This quantity was not estimated more accurately because it is less than 10 TPY (i.e. 5.5 TPY).

Unless otherwise noted, all of the emission factors were all based on the most conservative of the most reasonable AP-42 emission factors. For example, for Source IDs 2 & 3 (i.e. the boilers), which are able to use either diesel fuel or natural gas, the larger emission factors were used (larger for diesel fuel, except for CO and VOCs). Also, for Source ID 1 (i.e. the incinerator), which is allowed to burn different types of waste (i.e. oily waste, municipal solid waste, or any combination thereof), the highest emission factors were used.

Unless otherwise noted, the emission calculations were based on the assumptions that the heating value of diesel fuel is 140,000 MMBtu/gal, the heating value of natural gas is 1020 BTU/scf, and the boilers are 85% efficient. The emissions were assumed to be zero when no AP-42 emission-factor data were available.

All of the SO₂ emissions for Source IDs 2 – 5 were based on the mass balance in AP-42, assuming that the diesel fuel is 0.5 weight percent sulfur. All of the SO₂ emissions for the natural gas fired boilers (insignificant sources) were based on (an adjusted AP-42) mass balance, assuming that the natural gas is 60 ppm H₂S. The actual SO₂ emissions were calculated using these same conservative assumptions instead of the more accurate actual fuel-sulfur values.

The Permittee calculated the CO and PM potential and actual emissions from the worst-case 3-hour average between the 11/18 & 11/19/99 incinerator (i.e. Source ID 1) source tests, adjusted for the 2500 lb/hr incinerator capacity by multiplying by the ratio of 2500 lb/hr divided by the charging rate during the source tests. The source tests on 11/18 & 11/19/99 charged 1785 lb/hr of oily waste & 2121 lb/hr of oily waste/municipal solid waste, respectively. The Permittee calculated the CO emission factor, in lb/hr, by multiplying the worst-case CO concentration (i.e. 5.9 ppm from the 11/18 source test) times the average exhaust flow rate during the source test (i.e. 11,847 scf/hr) times the ratio 2500/1785 times a conversion factor. The Permittee calculated the PM emission factor, in lb/hr, by multiplying the worst-case PM emission factor (i.e. 0.35 lb/hr from the 11/18 source test) times the ratio 2500/1785. The department changed the CO potential emissions for this facility by multiplying the CO potential emissions from the incinerator by the ratio of the incinerator CO concentration limit (i.e. 100 ppm) divided by the worst-case CO concentration (i.e. 5.9 ppm). This changed the incinerator's CO potential emissions from 1.5 to 22.3 TPY. The department changed the PM potential emissions for this facility by multiplying the PM potential emissions from the incinerator by the ratio of the PM concentration limit (i.e. 0.08 gr/dscf corrected to 12% CO₂) divided by the worst-case incinerator concentration (i.e. 0.0065 gr/dscf wrongly corrected to 7% O₂ from the 11/18 source test). This changed the facility's PM potential emissions from 1.7 to 21.2 TPY. These changes more accurately calculate the facility's potential emission. Note that the May 1996—i.e. the second most recent and the only other after the February 1996 derating—source tests were not used to calculate emission factors because the Permittee made a physical change to the incinerator in September 1998 to reduce emissions.

The assessable potential to emit is simply those regulated air contaminants for which the facility has the potential to emit quantities greater than 10 tons per year.

BASIS FOR REQUIRING AN OPERATING PERMIT

North Slope Borough Service Area Ten Incinerator Plant requires an operating permit because it has the potential to emit 100 tons per year (tpy) or more of a regulated air contaminant. **North Slope Borough Service Area Ten Incinerator Plant** meets the definition of operating permit facility in the state regulations at Section 2.

Alaska regulations require operating permit applications to include identification of “regulated sources.” As applied to **North Slope Borough Service Area Ten Incinerator Plant**, the state regulations require a description of:

Each incinerator, including a demonstration showing each requirement in 18 AAC 50.050, Incinerator Emissions Standards, that applies [18 AAC 50.335(e)(4)(A)];

Each source regulated by a standard in 18 AAC 50.055, Industrial Processes and Fuel-Burning Equipment [18 AAC 50.335(e)(4)(C)];

Each source subject to a standard adopted by reference in 18 AAC 50.040 [18 AAC 50.335(e)(2)]; and

Sources subject to requirements in an existing DEC permit [18 AAC 50.335(e)(5)]

The emission sources at **North Slope Borough Service Area Ten Incinerator Plant** classified as “regulated sources” according to the above DEC regulations are listed in TABLE 1 of Permit No. 187TVP01.

CURRENT AIR QUALITY PERMITS

Previous Air Quality Permit to Operate

The most recent permit issued for this facility is permit-to-operate number 9473-AA003. This permit-to-operate include all construction authorizations issued through February 7, 1994, and was issued before January 18, 1997. All facility-specific requirements established in this previous permit are included in the new operating permit as described below.

Construction Permits

No construction permits have been issued for this facility after January 18, 1997 (the effective date of the new divided operating and construction-permitting program).

Title-V Operating Permit Application History

The owner or operator submitted an application on November 26, 1997. The application was complete after the department received additional information on March 3, 1998.

The owner or operator amended this application on April 16, 1999 and on November 14, 2000.

Additional information was received on March 3, 1998 and October 16, 2000.

COMPLIANCE HISTORY

The facility has operated at its current location since 1981. Review of the permit files for this facility, which includes the past inspection reports, indicates that this facility is generally operating in compliance with its operating permit. The most recent inspection was conducted on June 7 – 8, 2001 by ADEC. No violations were noted during this inspection. The incinerator was operating at the time of this inspection, and ADEC observed no opacity.

The second-most recent inspection conducted at this facility was a joint inspection March 8 – 10, 1999 by EPA and ADEC. EPA noted what they considered to be three violations (i.e. issues), whereas ADEC noted very similar issues during our March 17, 1997 inspection. The department has also been concerned about the relief damper (also called “Cupola Cap” or “Auxiliary Vent”) on the incinerator (i.e. Source ID 1) because this device is designed to bypass the electrostatic precipitator (ESP). Permit No. 187TVP01 resolves these issues via conditions to prevent future violations. These issues and resolutions were:

- Issue #1: failure to certify its opacity and CO monitors as accurate is addressed by conditions 3.1 and 8.1, which require the Permittee to certify its opacity and CO monitors according to certain performance specifications.
- Issue #2: failure to keep monitoring records is addressed by condition 44, which requires the Permittee to keep records required by the permit for at least five years.
- Issue #3: failure to notify the department prior to modifying the incinerator (i.e. Source ID 1) by derating it from 5,000 lb/hr (i.e. 40 MMBtu/hr) to 2,500 lb/hr (i.e. 20 MMBtu/hr) is not a compliance issue because this was not a modification under AS 46.14.990(16), whereas this change did not increase actual emissions. Condition 1.1 lists the potential emissions and Section 4 describes each significant source at this facility. The department received a copy of the March 10, 1999 manufacturer’s de-rating certification on November 14, 2000.
- Relief Damper: conditions 4 and 7 address the department’s concerns about this device.

FACILITY-SPECIFIC REQUIREMENTS CARRIED FORWARD

18 AAC 50.350(d)(1)(D) requires that this permit include each facility specific requirement established in prior permit 9473-AA003. Table 1 below lists the old requirement (condition) and the new condition that carries over the old requirement into the new permit.

Table 1. A comparison of pre-January 18, 1997 Permit No. 9473-AA003 facility-specific conditions to Permit No. 187TVP01 conditions. This table does not include standard and general conditions.

Permit No. 9473-AA003 condition	Description of Requirement	Permit No. 187TVP01 condition	How condition was revised
Introductory paragraph	Authority for permit and source list	Section 2 and TABLE 1	same information, different format
1	comply with ambient air quality standards	Not Applicable	now required only for construction permits.
2 and Exhibit B	comply with most stringent emission standards, limits, & specifications	Section 5	emission limits unchanged and now listed as conditions
3 and Exhibit A	facility operating report	47	more periodic reporting is required
5	residue disposal	10	unchanged
Exhibit C	Continuous Process Monitoring Requirements	3.1, 8.1, and 9.1	requirements unchanged and now listed as conditions

LEGAL AND FACTUAL BASIS FOR THE PERMIT CONDITIONS

Conditions 1 - 2

Legal Basis: [18 AAC 50.350(c) & 18 AAC 50.400 – 420, 1/18/97]

The regulations require all permits to include due dates for the payment of fees and any method the Permittee may use to re-compute assessable emissions.

Factual Basis: These conditions require the Permittee to pay fees in accordance with the department's billing regulations. The department's billing regulations set the due dates for payment of fees based on the billing date.

The conditions also set forth how the Permittee may recompute assessable emissions. If the Permittee does not choose to annually calculate assessable emissions, emissions fees may be paid based on “potential to emit.”

As described in the last paragraph of Condition 13 of this Statement of Basis, the SO₂ PTE is based on diesel fuel with a 0.5% by weight sulfur content or fuel gas with a sulfur content of 60 ppm H₂S by volume.

Condition 3

Legal Basis: [18 AAC 50.040(a)(4), 7/2/00]
[18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]

The condition applies because the source is an incinerator that is not a municipal wastewater treatment plant sludge incinerator.

Factual basis: The condition reiterates the applicable opacity standard. The Permittee may not cause or allow their equipment to violate this standard.

Monitoring is done with a continuous opacity monitoring system meeting the performance specifications in 40 CFR 60, Appendix B. Monitoring conditions include frequency of calibrations, performance specification verifications and observations of opacity so incinerator operators will have prompt feedback on PM emissions.

The intent of this monitoring is for the Permittee to maintain continuous control over combustion and emission controls to prevent excess emissions, and to take prompt corrective action when necessary.

Condition 4

Legal Basis: [18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.240(d) – (g), 1/18/97]

[18 AAC 50.350(g) – (i), 1/18/97]

The condition applies to the relief damper (also called “Cupola Cap” or “Auxiliary Vent”) on Source ID 1 because this device bypasses the control equipment (e.g. the electrostatic precipitator).

Factual basis: This condition prohibits the Permittee from opening the relief damper, bypassing the ESP, so that the opacity standard and PM standards are not exceeded, except as provided in 18 AAC 50.240(d) – (g). The Permittee must monitor, record, and report when and how long the relief damper opens.

Condition 5

Legal Basis: [18 AAC 50.050(b), 1/18/97]

[18 AAC 50.350(g) – (i), 1/18/97]

The condition applies because the source is an incinerator with a rated capacity greater than 2000 lb/hr that is not a municipal wastewater treatment plant sludge incinerator.

Factual basis: The condition reiterates the applicable PM standard. The Permittee may not cause or allow their equipment to violate this standard. The monitoring conditions set a twenty-four month frequency for Method 5 testing under the worst charging conditions. The worst charging conditions occur while charging oily wastes, as demonstrated by source tests on 11/18 and 11/19/99.

PM source tests were conducted (three runs per day) on Source ID 1 on 11/18/99 and 11/19/99. They burned 1785 lb/hr of oily waste and 2121 lb/hr of oily waste & municipal solid waste, respectively, during the source tests. The results were 0.0032 and 0.0016 gr./dscf, respectively, and were 0.0065 and 0.0020 gr./dscf when wrongly corrected to 7% O₂ instead of corrected to 12% CO₂. The department accepted these results with the wrong emission factor because they were much less than the 0.08 gr./dscf limit.

Condition 6

Legal Basis: [18 AAC 50.050(b), 1/18/97]

[18 AAC 50.350(g) – (i), 1/18/97]

This condition is the primary, routine surrogate to confirm compliance with the PM emission standard in condition 5.

Factual basis: For an incinerator system to comply with the PM (and opacity) standard(s), adequate control must be maintained over the incinerator and control equipment by operating the control device, i.e. ESP, according to manufacturer’s recommended operating parameters. The purpose of this condition is for the department to confirm continual compliance with the PM standard in 18 AAC 50.050(b) by confirming that the ESP is operated properly. The ESP must be operated properly at all times because the three-hour PM standard in

18 AAC 50.050(b) could be exceeded much quicker than three hours if the uncontrolled PM standard is significantly higher than the limit.

Condition 7

Legal Basis: [18 AAC 50.050(b). 1/18/97]

[18 AAC 50.350(g) – (i), 1/18/97]

The condition applies in lieu of more frequent PM source tests because the source is an incinerator that operates under highly variable conditions.

Factual basis: The purpose of a standard operating procedures manual is to assist the incinerator operators to operate the incinerator as cleanly as possible while producing minimal emissions, especially PM emissions. This permit does not make any specifications about this manual other than the Permittee must develop one with this purpose. This permit could require more frequent PM source testing without such a manual for a source that operates under such highly variable conditions, especially regarding the types and conditions of the wastes.

Conditions 8 – 9

Legal Basis: [18 AAC 50.040(a)(4), 7/2/00]

[18 AAC 50.110, 5/26/72]

[18 AAC 50.350(d)(1)(D), 6/21/98]

[18 AAC 50.350(g) – (i), 1/18/97]

[Permit No. 9473-AA003, condition 6 and Exhibits B & C, 2/7/94]

These conditions were taken from the previous operating permit as required by 18 AAC 50.350(d)(1)(D) with monitoring, recordkeeping, and reporting conditions included as required by 18 AAC 50.350(g) – (i).

Factual basis: CO concentration and combustion-zone temperature are surrogates of dioxin and furan emissions from Source ID 1. CO and temperature are both required to be measured using continuous emission monitors (CEM).

The CO source tests were conducted (three runs per day) on Source ID 1 on 11/18/99 and 11/19/99. They burned 1785 lb/hr of oily waste and 2121 lb/hr of oily waste & municipal solid waste, respectively, during the source tests. The results were 5.9 and 2.4 ppm, respectively. These results are much less than the 100-ppm limit.

Condition 10

Legal Basis: [18 AAC 50.350(d)(1)(D), 6/21/98]

[18 AAC 50.350(g) – (i), 1/18/97]

[Permit No. 9473-AA003, condition 5, 2/7/94]

This condition was taken from the previous operating permit as required by 18 AAC 50.350(d)(1)(D). Annual compliance certifications with this permit condition are sufficient monitoring, recordkeeping, and reporting.

Factual basis: It is the Permittee's responsibility to ensure that the ashes from the incinerator are disposed of only at a solid waste facility approved by the department.

Condition 11

Legal Basis: [18 AAC 50.055(a)(1), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]

Heaters, flares and engines are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in Alaska.

Factual basis: The condition cites the state visible emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow the heaters, flares and engines to violate this standard.

The monitoring, recordkeeping, and reporting requirements are listed in Section 13 of the permit. The requirements for the visible emission and PM standards are combined in this section.

There are two options for monitoring visible emissions. One option requires the Permittee to observe visible emissions in accordance with the state reference test method (i.e. 40 CFR 60, Method-9). The other option requires the Permittee to momentarily observe the exhaust for presence or absence of smoke. This latter option takes into account the difficulty and expense of getting certified readers to remote locations in Alaska.

Under the latter option, all sources are initially observed for the presence or absence of smoke in the exhaust for each of the first 30 operating days. Smoke is presumed to be absent if the exhaust exhibits less than five percent opacity. The department believes the initial 30 days is sufficient to capture all operating modes and to assure that the monitoring determines if the source complies with the visible emission standard. If smoke is absent during any 30 day operating period, the monitoring frequency is relaxed to one observation for every 30 days of source operation. The department believes monthly checks are sufficient to monitor for the presence of increased visible emissions that may result from degradation.

If the Permittee observes smoke in the exhaust, the Permittee may switch to the Method-9 opacity reading plan. Otherwise Permittee must take action to eliminate visible emissions from the source within 24 hours of the observation. After completing the action, the Permittee continues to observe the exhaust for the presence or absence of smoke for 30 operating days. If smoke is observed during this 30-day period, the Permittee must take Method-9 opacity readings using the state reference test method within seven days after the visible emissions are observed.

The recordkeeping requirements consist of keeping records of the results of all visible emission observations and records of any actions taken to reduce visible emissions. In the facility operating reports, the Permittee must include copies of the results of all observations

made using the state reference test method. The Permittee must report emissions in excess of the state visible emission standard and deviations from permit conditions.

Condition 12

Legal Basis: [18 AAC 50.055(b)(1), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]

Heaters and engines are fuel-burning equipment. This regulation applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition cites the state PM emission standard applicable to fuel-burning equipment. The Permittee shall not cause or allow heaters or engines to violate this standard.

The monitoring, recordkeeping, and reporting requirements are listed in Section 13 of the permit. The requirements for the visible emission and PM standards are combined in this section.

The requirement to test for PM to determine compliance with the standard is triggered by the results of observations conducted in accordance with the state reference test method. For most sources the Permittee is required to conduct tests if the results of an observation show noncompliance with the visible emission standard or the average opacity indicates noncompliance with the PM standard.

The department is not requiring initial tests to show compliance with the PM standards. Based on manufacturers' data, the department believes that most new heaters and engines comply with the PM standard¹. Also, there are opacity-particulate correlations² that show emissions from heaters and engines commonly used in Alaska will meet the state PM (PM) standard of 0.05 grains per dry standard cubic foot (gr./dscf) of exhaust gas, if the average opacity in the exhaust is less than 20 percent and the exhaust stack diameter is at least 21 inches. The correlations also show that emissions from heaters and engines commonly used in Alaska with an exhaust stack diameter of at least 10 inches will always meet the 0.05 gr./dscf PM standard if the average opacity is less than 12%. None of the permitted exhaust stacks in Alaska should have exhaust stack diameters less than 10 inches; if they did, then the 12% (PM source test trigger) should be decreased to account for the smallest stack diameter. The department believes this is sufficient justification to not require initial compliance testing since the Permittee certified compliance with the visible emission standard in the application. However, the department is requiring testing if the Permittee observes visible emissions, that are not corrected, greater than the state PM standard or greater than 12% for exhaust stacks smaller than 21 inches.

In a general operating permit for engines, the department required source tests for PM when the average opacity of a visible emission observation exceeded twelve percent. Since that time, the department has uncovered additional test data and literature that supports a statement that heaters and flares will meet the 0.05 grain loading standard when the average

¹ See attached data

² See attached graph

opacity is less than twelve percent, provided that the exhaust outlet diameter (path length for opacity observations) exceeds 21 inches. Testing conducted at both an Alaskan power plant and an Hawaiian utility confirm that compliance with the 20 percent opacity standard will insure compliance with the 0.05 gr./dscf particulate standard, provided that the exhaust outlet is 21 inches or larger. This test data closely agrees with values obtained using the smoke density calculator at <http://www.dieselnet.com/calculator/index.html>. The calculator is based on the report, *Particulate Matter Measurements*, DieselNet Technology Guide, Revision 1997.12. Based on this new information, the department is requiring testing if the Permittee observes visible emissions greater than 12%, expressed as a six-minute average and the stack diameter if the source is less than 21 inches. The department is also requiring the Permittee to measure visible emissions during a source test and to calculate the average opacity during the test.

The Permittee must report copies of all source test reports and emissions in excess of the PM standard.

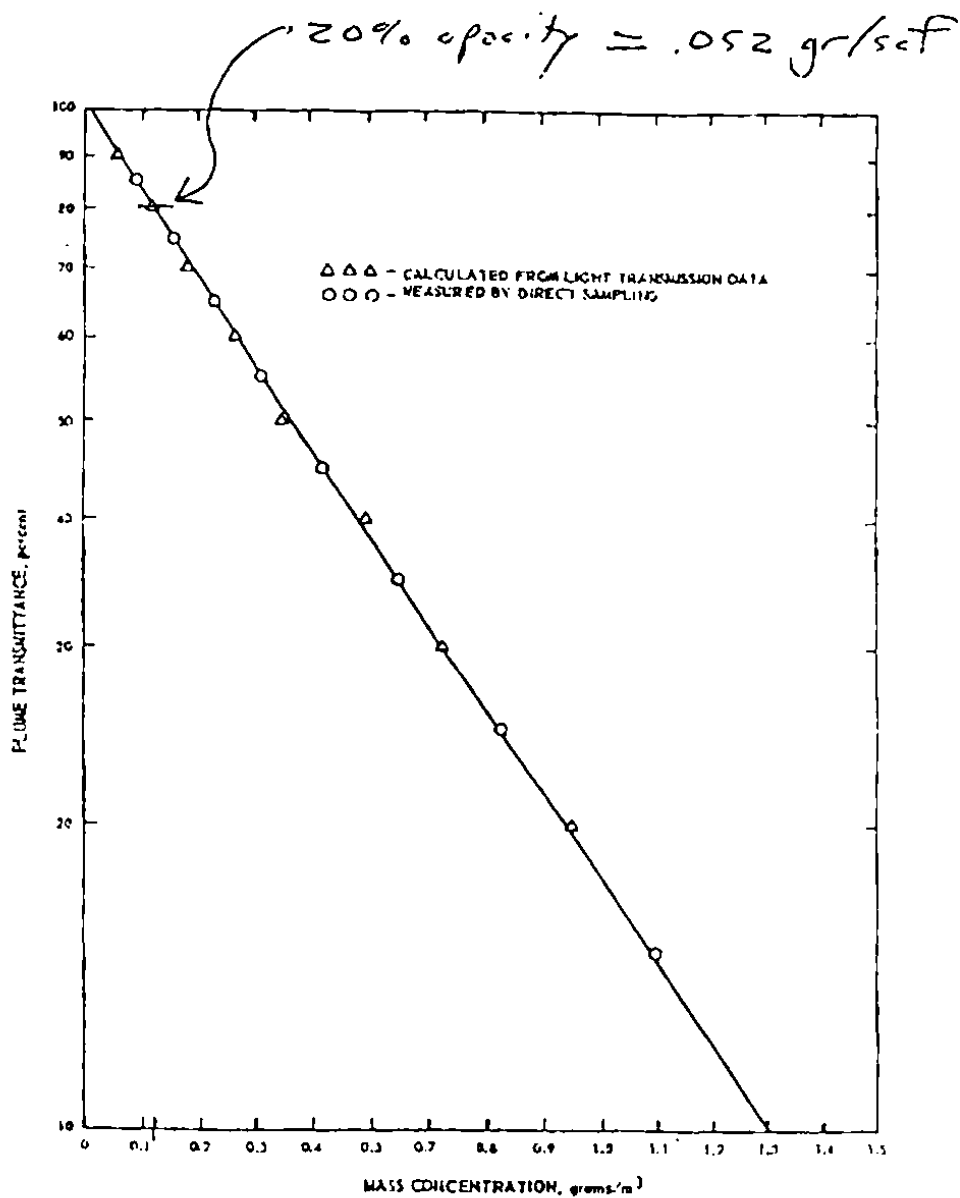


Figure 32. Mass concentration of black plume as calculated from transmittance and measured by direct sampling.

OPTICAL PROPERTIES AND VISUAL EFFECTS

[illegible]

Condition 13

Legal Basis: [18 AAC 50.055(c), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]
[18 AAC 50.410(c), 1/18/97]

The condition applies to operation of all fuel-burning equipment in the State of Alaska.

Factual basis: The condition re-iterates a sulfur emission standard applicable to fuel-burning equipment. The Permittee may not cause or allow their equipment to violate this standard.

Diesel Fuel: Diesel fuel sulfur is measured in weight percent sulfur. Calculations show that fuel containing no more than 0.5% sulfur will always comply with the emission standard. This is true for all liquid hydrocarbon fuels, even with no excess air. Verification of ASTM fuel grade as No. 1 or No. 2 fuel oil will certify compliance with the standard because these fuel oils always have a fuel sulfur content of no more than 0.5%. For fuels with a sulfur content higher than 0.5%, this condition requires the Permittee to use the equations in Section 15 to calculate the exhaust gas SO₂ concentration, showing whether the standard was exceeded. The equations in Section 15 are all based on stoichiometric mass balance. The ADEC Air Permits Web Site contains the supporting calculations at

<http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>

Fuel Gas: Fuel gas sulfur is measured as H₂S concentration in ppm by volume. Calculations show that fuel gas containing no more than 4000 ppm H₂S will always comply with this emission standard. This is true for all fuel gases, even with no excess air. The calculations supporting this assertion are posted on the ADEC Air Permits Web Site at

<http://www.state.ak.us/dec/dawq/aqm/newpermit.htm>

Equations to calculate the exhaust gas SO₂ concentrations resulting from the combustion of fuel gas were not included in this permit. Fuel gas with an H₂S concentration of even 10% of 4000 ppm is currently not available in Alaska and is not projected to be available during the life of this permit.

SO₂ Potential to Emit (PTE): The SO₂ PTE is based on 0.5% by weight sulfur of the diesel fuel and 60 ppm H₂S by volume of the fuel gas. If these fuel sulfur assumptions, i.e. 0.5% and 60 ppm, are exceeded, then the SO₂ PTE could be exceeded depending on the hours of operation and the rate of fuel consumption. In any case, this facility will not be classified under 18 AAC 50.325(b)(1) for SO₂ at 0.5% and 4000 ppm. However, the department may, in its discretion, under the authority of 18 AAC 50.201(a) require the Permittee to evaluate the effect of the facility's SO₂ emissions on ambient air before allowing the fuel sulfur concentration to exceed the 0.5% and 60 ppm fuel sulfur assumptions in this permit.

Conditions 14 – 16

Legal Basis: [18 AAC 50.210(a)(3)(B), 1/18/97]
[18 AAC 50.335(g)(1), 6/21/98]
[18 AAC 50.350(f)(4), 6/21/98]
[18 AAC 50.350(g) – (i), 1/18/97]

These limits were requested by the Permittee in a certified, notarized letter to the department on 11/14/00.

Factual basis: These conditions include the owner-requested limits. Conditions 14 – 15 include monitoring, recordkeeping, and reporting requirements that are verifiable and that can be determined at least monthly. Condition 16 does not include monitoring, recordkeeping, and reporting conditions because this condition is a prohibition that the Permittee can control by not accepting certain types of wastes to be incinerated at this facility.

Conditions 17 - 19

Legal Basis: [18 AAC 50.050(a)(2), 1/18/97]
[18 AAC 50.055(a)(1), 1/18/97]
[18 AAC 50.055(b)(1), 1/18/97]
[18 AAC 50.055(c), 1/18/97]

Factual basis: These are general emission standards which apply to all industrial processes fuel-burning equipment, and incinerators regardless of size. The conditions re-iterate the general standards and require compliance for insignificant sources. The Permittee may not cause or allow their equipment to violate these standards. Insignificant sources are not listed in the permit unless specific monitoring, recordkeeping and reporting are necessary to ensure compliance.

The department finds that the insignificant sources at this facility do not need specific monitoring, recordkeeping and reporting to ensure compliance.

Condition 20

Legal Basis: [18 AAC 50.350(m)(3), 9/4/98]

Factual Basis: The regulations require the Permittee to certify that their insignificant sources comply with applicable requirements. The condition restates the regulatory requirement.

Condition 21

Legal Basis: [18 AAC 50.040(b)(3) & 18 AAC 50.350(d)(1), 1/18/97]
[Federal Citation: 40 C.F.R. 61, Subpart M, 12/19/96]

If the Permittee engages in asbestos demolition and renovation, then these requirements may apply.

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee engages in asbestos demolition or renovation. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 22

Legal Basis: [18 AAC 50.040(d) & 18 AAC 50.350(d)(1), 1/18/97]

[Federal Citation: 40 C.F.R. 82, Subpart F, 7/1/97]

Factual Basis: The condition cites and requires compliance with the regulations that will apply if the Permittee uses certain refrigerants. Because these regulations include adequate monitoring and reporting requirements and because the Permittee is not currently engaged in such activity, simply citing the regulatory requirements is sufficient.

Condition 23

Legal Basis [18 AAC 50.040(a) & (c), 7/2/00]

[18 AAC 50.040(b), 1/18/97]

[40 C.F.R. 60, 7/1/99]

[40 C.F.R. 61, 12/19/96]

[40 C.F.R. 63, 7/1/99]

Factual basis: This condition cites and requires compliance with the regulations that will apply if the Permittee engages in any activity subject to any 40 CFR 60, 40 CFR 61, or 40 CFR 63 regulation.

Condition 24

Legal Basis: [18 AAC 50.030, 12/30/00 & 18 AAC 50.350(f)(2)-(3), 1/18/97]

Factual basis: Maintaining and operating equipment in good working order is fundamental to preventing unnecessary or excess emissions. Standard conditions for monitoring compliance with emission standards are based on the assumption that good maintenance is performed. Without appropriate maintenance, equipment can deteriorate much more quickly, and periodic monitoring that is not continuous would be needed much more frequently to be sure that it is representative.

Records should be kept and available to the department. Records of deferred maintenance can be a reasonable trigger for requesting source testing.

For most existing equipment, the department does not specify that the Permittee must follow manufacturer's recommendations. If the manufacturer's recommendations are not suitable for Alaskan conditions, or don't relate to minimizing emissions, the Permittee can see that they are changed as a condition of purchase for existing equipment. The requirement for

complying with manufacturer's recommendations or with a specific operation and maintenance plan is included for control equipment because the efficient operation of control equipment directly relates to emissions, and the department does not anticipate that Alaskan conditions will require drastically different O & M.

It is not the department's intent in specifying manufacturer's recommendations to include those that endorse only the manufacturer's line of replacement parts. The condition states that any suitable replacement parts or equipment can be used.

Condition 25

Legal Basis: [18 AAC 50.045(a), 1/18/97]

Factual Basis: The requirement prohibits diluting emissions as a means of compliance. In practical terms, dilution only affects compliance when the emissions are being measured. Careful reviews of source test plans and operating conditions should reveal any dilution as a result of the introduction of non-process air into the exhaust.

Condition 26

Legal Basis: [18 AAC 50.040(e), 7/2/00]
[18 AAC 50.045(d), 1/18/97]
[18 AAC 50.350(d)(1), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies to the Permittee because the Permittee will engage in industrial activity at the facility.

Factual Basis: The condition restates the regulatory prohibition on fugitive dust. This prohibition calls for reasonable precautions to be taken to prevent PM from being emitted into the ambient air while engaged in industrial activities.

The Permittee must keep records describing all precautions taken to prevent PM from becoming airborne due to any of the activities described in this condition. If the precautions are not listed in the State Air Quality Control Plan, then the Permittee must also record a statement describing why the Permittee believes the precaution is reasonable. This monitoring ensures that the Permittee takes the reasonable precautions and has a reason for deciding if the precaution is reasonable.

The Permittee must perform visual surveys at least once each month, and take corrective action if PM is observed leaving the property. This is intended to identify whether the reasonable precautions taken are working, and to correct the problem if the precautions are not working.

Condition 27

Legal Basis: [18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

Applies to the facility because the facility contains a stack or source modified after November 1, 1982.

Factual Basis: The condition restates the prohibition on stack injection (i.e. disposing of material by injecting it into a stack). No specific monitoring for this condition is practical. Compliance is ensured by inspections, because the source or stack would need to be modified to accommodate stack injection.

Condition 28

Legal Basis: [18 AAC 50.040(e), 7/2/00]
[18 AAC 50.065(a) – (e), 1/18/97]
[18 AAC 50.350(d)(1), 1/18/97]
[18 AAC 50.350(g) – (h), 1/18/97]

These conditions apply if the Permittee conducts open burning at the facility.

Factual Basis: The condition requires the Permittee to comply with the regulatory requirements when conducting open burning at the facility.

Not specific monitoring is required for this condition. The permit does require the Permittee to keep "sufficient records" to demonstrate compliance with the standards for conducting open burning, but does not specify what these records should contain.

More extensive monitoring and recordkeeping is not warranted because the Permittee does not conduct open burning as a routine part of their business. Also, most of the requirements are prohibitions, which are not easily monitored. Additional monitoring is achieved through condition 29, which requires a record of complaints. Therefore, the department does not believe that additional monitoring is warranted.

Condition 29

Legal Basis: [18 AAC 50.040(e), 7/2/00]
[18 AAC 50.110, 5/26/72]
[18 AAC 50.240(c), 1/18/97]
[18 AAC 50.350(d)(1), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies to the facility because the facility will have emissions.

Factual Basis: The condition restates the general prohibition on injurious air emissions, which applies to any emissions from the facility. While the other permit conditions and emissions limitation should ensure compliance with this condition, unforeseen emission impacts can violate this standard. These violations would go undetected except for complaints from affected persons. Therefore, to monitor compliance, the Permittee must monitor and respond to complaints.

The Permittee is to report any complaints and injurious emissions. The plant does not handle any large quantities of hazardous air pollutants. The Permittee must keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective

actions undertaken for these complaints and to submit copies of these records upon request of the department.

Condition 30

Legal Basis: [18 AAC 50.235(a) & 18 AAC 50.350(f), 1/18/97]

Applies to the facility because the facility contains equipment subject to a technology-based emission standard.

Factual Basis: This condition restates a regulation that requires the Permittee to take reasonable steps to minimize emissions if certain activity causes exceedance of a technology-based emission standard. Because the technology-based emission standard itself is a condition of the permit, the Permittee will report the excess emissions under condition 45. Because the excess emission report requires information on the steps taken to minimize emissions, this report is adequate monitoring for compliance with this condition.

Condition 31

Legal Basis: [18 AAC 50.345(b), 6/21/98]

[18 AAC 50.350(b)(3), 1/18/97]

Applies to the facility because the facility is a hazardous air contaminant major facility as described in 18 AAC 50.300(f).

Factual Basis: The Permittee must obtain written approval from the department before reconstructing a HAP-major source. Pre-construction approval for reconstructing a HAP major source is a requirement of the Clean Air Act. Alaska's construction permit program does not require a construction permit for reconstructing a source, only for reconstructing a facility. Therefore, this condition is a standard condition in all hazardous air contaminant major facility operating permits.

Condition 32

Legal Basis: [18 AAC 50.335(a), 1/18/97]

Applies if the Permittee intends to renew the permit.

Factual Basis: The condition restates the regulatory deadlines, citing the specific dates applicable to the facility. Submittal of the renewal application is sufficient monitoring, recordkeeping and reporting.

Condition 33

Legal Basis: [18 AAC 50.220(a) & 18 AAC 50.345(a)(10), 1/18/97]

Standard condition to be included in all permits.

Factual Basis: Condition requires the Permittee to conduct source tests as requested by the department, therefore no monitoring is needed. Conducting the requested source test is its own monitoring.

Conditions 34 - 36

Legal Basis: [18 AAC 50.030, 12/30/00]
[18 AAC 50.035, 7/2/00]
[18 AAC 50.040(a)(b)(c)(d) & (e), 1/18/97 & 7/2/00]
[18 AAC 50.220(b) – (c), 1/18/97]
[18 AAC 50.350(g), 1/18/97]
[18 AAC 50.990(88), 1/18/97]
[Federal Citation: 40 C.F.R. 51, Appendix M, 7/1/99]
[Federal Citation: 40 C.F.R. 60, 7/1/99]
[Federal Citation: 40 C.F.R. 61, 12/19/96]
[Federal Citation: 40 C.F.R. 63, 7/1/99]

Applies when the Permittee is required to conduct a source test.

Factual Basis: These conditions restate regulatory requirements for source testing. As such, they supplement the specific monitoring requirements stated elsewhere in this permit. The tests reports required by later conditions adequately monitor compliance with these conditions, therefore no specific monitoring, reporting, or recordkeeping is needed.

Conditions 37 - 39

Legal Basis: [18 AAC 50.345(a)(10), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies when the Permittee is required to conduct a source test.

Factual Basis: Standard condition 18 AAC 50.345(a)(10) is incorporated through these three conditions. Because this standard condition supplements specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required. The source test itself is adequate to monitor compliance with this condition.

Condition 40

Legal Basis: [18 AAC 50.220(f) & 18 AAC 50.350(g), 1/18/97]

Applies when the Permittee tests for compliance with the PM standard.

Factual Basis: The condition incorporates a regulatory requirement for particulate matter source tests. The Permittee must use a certain equation to calculate the PM emission concentration from the source test results. Because this condition supplements specific monitoring requirements stated elsewhere in this permit, no monitoring, reporting, or recordkeeping is required.

Condition 41

Legal Basis: [18 AAC 50.205, 1/18/97]
[18 AAC 50.345(a)(9), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(i), 1/18/97]

Applies because the permit requires the Permittee to submit reports, and because the condition is a standard condition.

Factual Basis: This condition restates the regulatory requirement that all reports must be certified. To ease the certification burden, the condition allows the excess emission reports to be certified with the semi-annual operating report, although the excess emission reports must be submitted more frequently. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 42

Legal Basis: [18 AAC 50.350(i), 1/18/97]

Applies because the Permittee is required to send reports to the department.

Factual Basis: This condition merely specifies where submittals to the department should be sent. Receipt of the submittal at the correct department office is sufficient monitoring for this condition. This condition supplements the reporting requirements of the permit and no monitoring, recordkeeping or reporting for this condition is needed.

Condition 43

Legal Basis: [18 AAC 50.200, 1/18/97]
[18 AAC 50.345(a)(8), 1/18/97]
[18 AAC 50.350(b)(3), 1/18/97]
[18 AAC 50.350(g) – (i), 1/18/97]

Applies to all Permittees, and incorporates a standard condition

Factual Basis: Incorporates a standard condition in regulation, which tells the Permittee to submit information requested by the department. Receipt of the requested information is adequate monitoring.

Condition 44

Legal Basis: [18 AAC 50.350(h), 1/18/97]

Applies to records required by a permit.

Factual Basis: The condition restates the regulatory requirements for recordkeeping, and supplements the recordkeeping defined for specific conditions in the permit. The records being kept provide adequate evidence of compliance with this requirement, therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 45

Legal Basis: [18 AAC 50.235(a)(2), 18 AAC 50.240(c) & 18 AAC 50.350(i), 1/18/97]
Applies when the emissions or operations deviate from the requirements of the permit.

Factual Basis: This condition satisfies two regulatory requirements related to excess emissions—the technology-based emission standard regulation and the excess emission regulation. Although there are some differences between the regulations, the condition satisfies the requirements of each regulation.

The condition does not mandate the use of the department's reporting form, but it does specify that the information listed on the form must be included in the report.

The reports themselves and the other monitoring records required under this permit provide an adequate monitoring of whether the Permittee has complied with the condition. Therefore, no additional monitoring, recordkeeping or reporting is required.

Condition 46

Legal Basis: [18 AAC 50.040, 7/2/00 & 18 AAC 50.350(i)(2), 1/18/97]
[Federal Citation: 40 C.F.R. 60 & 40 C.F.R. 61, 7/1/99]
Applies to facilities subject to NSPS and NESHAP federal regulations.

Factual Basis: The condition supplements the specific reporting requirements in 40 C.F.R. 60 and 40 C.F.R. 61. The permit does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 47

Legal Basis: [18 AAC 50.350(d)(4), 1/18/97]
[18 AAC 50.350(f)(3), 1/18/97]
[18 AAC 50.350(i), 1/18/97]
Applies to all permits.

Factual Basis: The condition restates the requirements for reports listed in regulation. The condition supplements the specific reporting requirements elsewhere in the permit and does not need any monitoring, recordkeeping or reporting. The reports themselves are adequate monitoring for compliance with this condition.

Condition 48

Legal Basis: [18 AAC 50.350(j), 1/18/97]
[18 AAC 50.350(d)(4), 1/18/97]

Applies to all Permittees.

Factual Basis: This condition specifies the periodic compliance certification requirements, and specifies a due date for the annual compliance certification. Because this requirement is a report, no monitoring, recordkeeping or reporting is needed.

Condition 49

Legal Basis: [18 AAC 50.350(f)(3), 1/18/97]
[18 AAC 50.040(a)(1), 7/2/00]
[Federal Citation: 40 C.F.R. 60.11(g), 7/1/99]
[Federal Citation: 40 C.F.R. 52.12(c), 7/1/99]

Applies to all permits.

Factual Basis: This condition clarifies that any credible evidence can be used to verify compliance with the permit, not just the monitoring required under the permit. This condition is necessary to ensure compliance with the Clean Air Act. No monitoring, recordkeeping, or reporting is necessary for this condition. If the condition refers to a source subject to an NSPS the requirements of 40 C.F.R. 60.11(g) apply.

Conditions 50 - 56

Legal Basis: [18 AAC 50.345(a)(1) – (7) & 18 AAC 50.350(b)(3), 1/18/97]
Applies to all operating permits.

Factual Basis: These are standard conditions required for all operating permits.

Condition 57

Legal Basis: [18 AAC 50.350(l), 1/18/97]
Applies because the Permittee has requested a shield for the applicable requirements listed under this condition.

Factual Basis: The following table explains the permit shield requests and the department's applicability determination. The permit conditions sets forth the requirements that the department determined were not applicable to the facility, based on the permit application, past operating permit, construction permits and inspection reports.

Table 2. Permit Shield Decision

Shield requested for:	Shielded?	Reason for shield decision
40 C.F.R. 60, Subpart Cb	Yes	Source ID 1 does not have the capacity to incinerate 250 tons of waste per day.
40 C.F.R. 60, Subpart Ce	Yes	Condition 16 prohibits this facility from incinerating hospital, medical, or infectious waste.
40 C.F.R. 60, Subpart E	Yes	Condition 15 prohibits this facility from incinerating 50 tons of waste per day.
40 C.F.R. 60, Subpart Ea	Yes	Source ID 1 does not have the capacity to incinerate 250 tons of waste per day and Source ID 1 was constructed before December 1989.
40 C.F.R. 60, Subpart Eb	Yes	Source ID 1 does not have the capacity to incinerate 250 tons of waste per day and Source ID 1 was constructed before September 1994.
40 C.F.R. 60, Subpart Ec	Yes	Condition 16 prohibits this facility from incinerating hospital or medical or infectious waste and Source ID 1 was constructed before June 1996.
40 C.F.R. 60, Subpart K	Yes	All of the storage tanks at this facility are less than 40,000 gallons and they were constructed after May 1978.
40 C.F.R. 60, Subpart Ka	Yes	All of the storage tanks at this facility are less than 40,000 gallons.
40 C.F.R. 60, Subpart Kb	Yes	All of the storage tanks at this facility are less than 40 cubic meters (10,560 gallons) and they were constructed before 1984.
40 C.F.R. 60, Subpart O	Yes	Condition 16 prohibits this facility from incinerating sewage sludge.
40 C.F.R. 61, Subpart E	Yes	Condition 16 prohibits this facility from incinerating sewage sludge, this facility does not dry sewage sludge, and the operations at this facility do not involve mercury.
18 AAC 50.050(a)(1)	Yes	Source ID 1 is not a municipal wastewater treatment plant sludge incinerator because condition 16 prohibits this facility from incinerating sewage sludge.

Conditions 58 - 64

Legal Basis: [18 AAC 50.350(g) – (i), 1/18/97]
[18 AAC 50.350(d)(1)(C), 6/21/98]
[18 AAC 50.055(b)(1), 1/18/97]

Applies because these conditions detail the monitoring, recordkeeping, and reporting required in conditions 11 and 12.

Factual Basis: Each permit term and condition must include monitoring, recordkeeping and reporting for the Permittee to show verifiable compliance with each permit term and condition. The Permittee must establish by actual visual observations which can be supplemented by other means, such as a defined Facility Operation and Maintenance

Program, that the facility is in continuous compliance with the State's emission standards for visible emissions and PM. The correlation between PM and visible emissions that is the basis for this monitoring procedure is discussed under conditions 11 and 12.

These conditions detail a stepwise process for monitoring compliance with the State's visible emissions and PM standards for liquid and gas fired sources. Equipment types covered. Equipment types covered by these conditions are internal combustion engines, turbines, heaters, boilers, and flares. Initial monitoring frequency schedules are established along with subsequent reductions or increases in frequency depending on the results of the self-monitoring program.

Monitoring frequencies for hydrocarbon fuels, both liquid and gaseous, are detailed in these conditions. The monitoring intervals for gaseous fuels are less frequent than for liquid fuels in recognition of the reduced propensity of gaseous fuels to produce PM as a result of combustion. This reduced level of monitoring for individual facilities in conjunction with the very large number of gas fired sources in Alaska should provide the department with sufficient data to evaluate the compliance history of these sources as a category.

Reasonable action thresholds are established in these conditions that require the Permittee to progressively address potential visible emission problems from sources either through maintenance programs and/or more rigorous tests that will quantify whether a specific emission standard has been exceeded.

Notification of the department via recordkeeping and reporting requirements are included in these conditions.